Remarks

In view of the following discussion, the Applicants submit that none of the claims now pending in the application are unpatentable under the provisions of 35 U.S.C. § 103. Thus, the Applicants believe that all of these claims are now in allowable form.

I. REJECTION OF CLAIMS 1-17 UNDER 35 U.S.C. § 103

A. Claims 1, 4-5, 7-9, 11-17

The Examiner has rejected claims 1, 4-5, 7-9, 11-17 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Bechtel (US Patent 5,896,092, issued April 20, 1999, hereinafter referred to as "Bechtel") in view of Markwell et al. (US Patent 6,078,269, issued June 20, 2000, hereinafter referred to as "Markwell"). It should be noted that the Examiner actually cited Markwell as having a patent number of 6,532,406 in Paragraph 2 of the Office Action. However, patent number of 6,532,406 refers to a vehicle computer system by Schmedding et al. Applicants believe that the Examiner is actually referring to patent number 6,078,269 instead. As such, Applicants' response below is directed to Markwell 6,078,269. Nevertheless, Applicants respectfully traverse the rejection.

Bechtel teaches an alarm system for use in attracting the attention of hearing impaired persons and/or attracting the attention of persons in high decibel areas. (See Bechtel, Abstract.)

Markwell teaches a battery-powered RF-interconnected sensor system. (See Markwell, Abstract.) Specifically, Markwell teaches a wireless detector that is capable of communicating with other wireless detectors using RF communication. The detector may comprise an LED 51 that is controlled by a controlling means 35. However, Markwell does not teach or suggest a flash circuit having a flashtube for generating a flash, where the trigger of the flashtube is controlled by the controlling means.

The Examiner's attention is directed to the fact that Bechtel and Markwell (alone or in any permissible combination) fail to teach or suggest an alarm unit that utilizes an application specific integrated circuit (ASIC) for triggering a flash circuit having a

flashtube or for selecting an audio frequency of an audio warning signal, as positively claimed by Applicants in independent claims 1 and 16, which recite:

> 1. An alarm unit, comprising:
> a flash circuit having a flashtube for generating a flash; and
> an application specific integrated circuit (ASIC) coupled to said flash circuit, for triggering said flash. (Emphasis Added.)
>
> 16. An alarm unit, comprising:
> an audio circuit for generating an audio warning signal; and
> an application specific integrated circuit (ASIC) coupled to said audio circuit, for triggering said audio warning signal, wherein said ASIC selects an audio frequency for said audio warning signal. (Emphasis Added.)

In one embodiment, the Applicants' invention teaches that an ASIC may be utilized in an alarm unit. Utilizing ASIC has several exemplary advantages over prior alarm units such as allowing the strobe circuit having **a flashtube** to operate more quietly, being an actively controlled current-limiter, and greater efficiency. (See Applicants' Specification, Page 2.)

In contrast, the alleged combination (as taught by Bechtel) fails to teach, show or suggest an alarm unit that utilizes ASIC. Nowhere does Bechtel specify that the integrated circuitry is an ASIC.

Moreover, the significant gap left by Bechtel is not bridged by the combination of Markwell with Bechtel. The Examiner has conceded that Bechtel did not teach using an ASIC as taught by Applicants' independent claims 1 and 16. (*See* Office Action, Paragraph 2) However, the Examiner asserts that Markwell teaches using an ASIC for triggering the flashing pattern indication alarm 51. The Applicants respectfully submit that the Examiner has interpreted Markwell too broadly. Markwell's indication alarm 51 is only limited to an LED and **not** a flashtube as positively recited by the Applicants in independent claim 1. Applicants' claim scope is not so broad that it encompasses an LED. It should be noted that a flashtube and an LED is not interchangeable. In fact, the electrical characteristics and the operational constraints of a flashtube and LED are significantly different. To illustrate, the use of an ASIC allows the strobe circuit to operate at a higher frequency, thereby providing a faster switching speed which, in turn,

allows for the use of a smaller inductor. The smaller inductor will allow the strobe circuit to operate more quietly because any magnetostriction caused by the inductor will likely be at an upper threshold of the human hearing response. This is only one example of why Applicants' invention provides an advantage in the field of alarm units that employ a flashtube. (See e.g., Applicants' specification, Page 2)

More specifically, Bechtel teaches away from Markwell because Bechtel discloses an alarm unit using a flashtube, whereas Markwell teaches a detector unit using an LED. As stated above, a flashtube is not interchangeable with an LED. Significant engineering is required to deploy an LED in a notification alarm that previously employed a flashtube. The drive circuit for the flashtube is completely different from the trigger circuit for an LED. Thus, Applicants' independent claim 1 is not made obvious by the teaching of Bechtel and Markwell.

Furthermore, the alleged combination (as taught by Markwell) completely fails to teach or suggest an ASIC for selecting an audio frequency of an audio warning signal as positively claimed by the Applicants in amended independent claim 16. Namely, Markwell only discloses that the controller means will activate the audible alarm. There is absolutely no disclosure that the controller means is capable of selecting an audio frequency of an audio warning signal. Bechtel similarly fails to disclose this novel approach. It should be noted that independent claim 16 was amended by incorporating the limitation of claim 17. Thus, claim 17 was canceled without prejudice.

As such, there is no motivation to combine Markwell and Bechtel, where Markwell only discloses a detector unit having an LED and Bechtel only discloses an alarm system with a flashtube. In other words, the Examiner failed to provide the necessary motivation to combine the two references to make Applicants' invention obvious. As such Markwell fails to bridge the substantial gap left by Bechtel. Thus, Applicants' independent claim 16 is not made obvious by the teaching of Bechtel and Markwell.

In rejecting claims under 35 U.S.C. §103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John

Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. Denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp. 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Applicants respectfully submit that the Examiner failed to provide a prima facie case of obviousness.

Dependent claims 4-5, 7-9, and 11-15 depend from independent claim 1 and recite additional limitation. As such, and for the exact same reason set forth above, the Applicants submit that claims 4-5, 7-9, and 11-15 are also not unpatentable over the teachings of Bechtel and Markwell. Therefore, the Applicants submit that claims 1, 4-5, 7-9, and 11-16, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

B. Claims 2 and 3

The Examiner has rejected claims 2 and 3 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Bechtel in view of Markwell and further in view of Preston, (US Patent 4,578,586, issued March 25, 1986). Applicants respectfully traverse the rejection.

The teachings of Bechtel and Markwell have been discussed above. Preston teaches a chemical agent monitor and alarm device. (See Preston, Abstract.)

However, Preston fails to bridge the substantial gap left by Bechtel and Markwell. Specifically, Preston fails to teach or suggest an alarm unit that utilizes an application

specific integrated circuit (ASIC) for triggering a flash circuit having a flashtube, as positively claimed by Applicants in independent claim 1 *supra*.

The Applicants' invention teaches that an ASIC may be utilized in an alarm unit. Utilizing ASIC has several exemplary advantages over prior alarm units such as allowing the strobe circuit having a flashtube to operate more quietly, being an actively controlled current-limiter, and greater efficiency. (See Applicants' Specification, Page 2.)

In contrast, Bechtel fails to teach, show or suggest an alarm unit that utilizes ASIC. Nowhere does Bechtel specify that the integrated circuitry is an ASIC. As discussed above Markwell and Bechtel cannot be meaningfully combined. Moreover, this deficiency is not bridged by the teaching of Preston because Preston also fails to specify using an ASIC. As such, there is no motivation to combine Markwell and Bechtel, and Preston, where Markwell only discloses a detector unit with an LED, where Bechtel only discloses an alarm system with a flashtube and Preston teaches a chemical agent monitor. Therefore, the combination of Bechtel, Markwell and Preston fail to teach, show, suggest or provide motivation for an alarm unit that utilizes an ASIC for triggering a flash circuit having a flashtube.

Dependent claims 2 and 3 depend from independent claim 1 and recite additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claims 2 and 3 are also not unpatentable over the teachings of Bechtel, Markwell and Preston. Therefore, the Applicants submit that claims 2 and 3, as they now stand, fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder.

C. Claim 6

The Examiner has rejected claim 6 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Bechtel in view of Markwell and further in view of Kataoka, et al. (US Patent 4,625,151, issued November, 25, 1986, hereinafter referred to as "Kataoka"). Applicants respectfully traverse the rejection.

The teachings of Bechtel and Markwell have been discussed above. Kataoka teaches a flash device that uses the same battery to supply both a booster circuit and the processing circuit. (See Kataoka, Abstract.)

However, Kataoka fails to bridge the substantial gap left by Bechtel and Markwell. Specifically, Kataoka fails to teach or suggest an alarm unit that utilizes an application specific integrated circuit (ASIC) for triggering a flash circuit having a flashtube, as positively claimed by Applicants in independent claim 1 *supra*.

The Applicants' invention teaches that an ASIC may be utilized in an alarm unit. Utilizing ASIC has several exemplary advantages over prior alarm units such as allowing the strobe circuit having a flashtube to operate more quietly, being an actively controlled current-limiter, and greater efficiency. (See Applicants' Specification, Page 2.)

In contrast, Bechtel fails to teach, show or suggest an alarm unit that utilizes ASIC. Nowhere does Bechtel specify that the integrated circuitry is an ASIC. As discussed above Markwell and Bechtel cannot be meaningfully combined. Moreover, this deficiency is not bridged by the teaching of Kataoka because Kataoka also fails to specify using an ASIC. As such, there is no motivation to combine Markwell, Bechtel, and Kataoka, where Markwell only discloses a detector unit with an LED, Bechtel only discloses an alarm system with a flashtube and where Kataoka only teaches a flash device. Therefore, the combination of Bechtel, Markwell and Kataoka fail to teach, show, suggest or provide motivation for an alarm unit that utilizes an ASIC for triggering a flash circuit having a flashtube.

Dependent claim 6 depends from independent claim 1 and recites additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claim 6 is also not unpatentable over the teachings of Bechtel, Markwell and Kataoka. Therefore, the Applicants submit that claim 6, as it now stands, fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder.

D. Claim 10

The Examiner has rejected claim 10 in the Office Action under 35 U.S.C. § 103 as being unpatentable over Bechtel in view of Markwell and further in view of Hata, et

al. (US Patent 6,091,898, issued July 18, 2000, hereinafter referred to as "Hata"). Applicants respectfully traverse the rejection.

The teachings of Bechtel and Markwell have been discussed above. Hata teaches a lens-fitted photo film unit having IC. (See Hata, Abstract.)

However, Hata fails to bridge the substantial gap left by Bechtel and Markwell. Specifically, Hata fails to teach or suggest an alarm unit that utilizes an application specific integrated circuit (ASIC) for triggering a flash circuit having a flashtube, as positively claimed by Applicants in independent claim 1 *supra*.

The Applicants' invention teaches that an ASIC may be utilized in an alarm unit. Utilizing ASIC has several exemplary advantages over prior alarm units such as allowing the strobe circuit having a flashtube to operate more quietly, being an actively controlled current-limiter, and greater efficiency. (See Applicants' Specification, Page 2.)

In contrast, Bechtel fails to teach, show or suggest an alarm unit that utilizes ASIC. Nowhere does Bechtel specify that the integrated circuitry is an ASIC. As discussed above Markwell and Bechtel cannot be meaningfully combined. Moreover, this deficiency is not bridged by the teaching of Hata because Hata also fails to specify an alarm unit using an ASIC. As such, there is no motivation to combine Markwell, Bechtel, and Hata, where Markwell only discloses a detector unit having an LED, Bechtel only discloses an alarm system with a flashtube and where Hata only teaches a lens-fitted photo film unit having IC. Therefore, the combination of Bechtel, Markwell and Hata fail to teach, show, suggest or provide motivation for an alarm unit that utilizes an ASIC for triggering a flash circuit having a flashtube.

Dependent claim 10 depends from independent claim 1 and recites additional limitations. As such, and for the exact same reason set forth above, the Applicants submit that claim 10 is also not unpatentable over the teachings of Bechtel, Markwell and Hata. Therefore, the Applicants submit that claim 10, as it now stands, fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder.

Conclusion

Thus, the Applicants submit that all of these claims now fully satisfy the requirements of 35 U.S.C. §103. Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring the issuance of a final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Kin-Wah Tong, Esq. at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

10/13/05

Kin-Wah Tong, Attorney
Reg. No. 39,400
(732) 530-9404

Patterson & Sheridan, LLP
595 Shrewsbury Avenue
Shrewsbury, New Jersey 07702